

JUN 18 2003

## 2. 510(k) SUMMARY

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This summary of 510(k) safety and effectiveness information is submitted in accordance with the requirements of SMDA 1990 and 21 CFR 807.92.

510(k) Number: TBD

### Applicant Information:

Date Prepared: June 17, 2003

Name: LuMend, Inc.  
Address: 400 Chesapeake Drive  
Redwood City, CA 94063  
650-364-1400

Contact Person: Michael A. Daniel  
Phone Number: Office: 925-254-5228 / Cell 415-407-0223  
Facsimile Number: (925) 254-5187

### Device Information:

Classification: Class II Percutaneous Catheter  
Trade Name: LuMend Fronrunner™ GW CTO Catheter  
Common Name: Percutaneous Catheter  
Classification Name: Percutaneous Catheter, 74 DQY / 21 CFR 870.1250

### Predicate Devices:

The LuMend Fronrunner™ GW CTO Catheter is substantially equivalent in intended use and method of operation to the following predicate device:

LuMend Fronrunner™ CTO Catheter K023223 / K023114

### Device Description:

The LuMend Fronrunner™ GW CTO Catheter is a sterile single-use percutaneous catheter consisting of a handle assembly with an integral rotator and a side port for internal device flushing, a proximal braided shaft for push and torque control, a flexible distal shaft which may be manually shaped, an optional guide wire lumen and a radiopaque blunt-shaped distal variable-size tip assembly in various shapes and sizes. A handle lever provides manual adjustment of the size of the tip assembly, and the handle rotator provides rotational control for the shaft and distal tip assembly. The distal assembly consists of a set of bilateral hinged tip pieces. Guidance and

tracking of the catheter through the coronary or peripheral vasculature is accomplished by selective manual shaping of the flexible distal shaft, and controlled torquing of the handle rotator and/or the use of a guide wire.

**Intended Use:**

The LuMend Frontrunner™ GW CTO Catheter is intended to facilitate the intra-luminal placement of conventional guide wires beyond stenotic lesions (including chronic total occlusions) in the peripheral and coronary vasculature prior to further percutaneous intervention.

**Comparison to Predicate Device(s):**

The LuMend Frontrunner™ GW CTO Catheter is substantially equivalent to the previously cleared LuMend Frontrunner™ CTO Catheter in terms of embodiment, shape, appearance and function. It has the same indications for use and makes use of the identical mechanism of action: "blunt micro-dissection" to facilitate placement of a guide wire across stenotic vascular lesions including Chronic Total Occlusions (CTOs).

***In Vitro, In Situ and In Vivo* Test Data:**

Design analysis, *in vitro* and *in vivo* data confirm that basic functional characteristics are substantially equivalent to the predicate device cited. Routine device evaluation consists of testing specified in FDA's Coronary and Cerebrovascular Guidewire Guidance Document (January 1995) and included *in vitro* tensile, torque strength, torqueability, tip flexibility, coating adherence/integrity, biocompatibility and catheter compatibility. All data continued to fall well within internal specification requirements, as well as external standard requirements and predicate performance expectations.

**Summary:**

Based upon the product technical information, intended use, performance and biocompatibility information provided in this pre-market notification, the LuMend Frontrunner™ GW CTO Catheter has been shown to be substantially equivalent to a currently marketed predicate device.



Food and Drug Administration  
10903 New Hampshire Avenue  
Document Control Center – WO66-G609  
Silver Spring, MD 20993-0002

LuMend, Inc.  
c/o Mr. Michael A. Daniel  
Regulatory and Clinical Affairs  
400 Chesapeake Drive  
Redwood City, CA 94063

SEP 18 2013

Re: K031005  
Trade/Device Name: LuMend Frontrunner *GW* CTO Catheter  
Regulation Number: 21 CFR 870.1250  
Regulation Name: Percutaneous Catheter  
Regulatory Class: Class II  
Product Code: PDU, DQY  
Dated: May 17, 2003  
Received: May 19, 2003

Dear Mr. Daniel:

This letter corrects our substantially equivalent letter of June 18, 2003.

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act) that do not require approval of a premarket approval application (PMA).

You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration. Please note: CDRH does not evaluate information related to contract liability warranties. We remind you, however, that device labeling must be truthful and not misleading.

If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 898. In addition, FDA may publish further announcements concerning your device in the Federal Register.

Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Part 801); medical device reporting (reporting of medical

device-related adverse events) (21 CFR 803); good manufacturing practice requirements as set forth in the quality systems (QS) regulation (21 CFR Part 820); and if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR 1000-1050.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801), please contact the Division of Small Manufacturers, International and Consumer Assistance at its toll-free number (800) 638 2041 or (301) 796-7100 or at its Internet address <http://www.fda.gov/MedicalDevices/ResourcesforYou/Industry/default.htm>. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21 CFR Part 807.97). For questions regarding the reporting of adverse events under the MDR regulation (21 CFR Part 803), please go to <http://www.fda.gov/MedicalDevices/Safety/ReportaProblem/default.htm> for the CDRH's Office of Surveillance and Biometrics/Division of Postmarket Surveillance.

You may obtain other general information on your responsibilities under the Act from the Division of Small Manufacturers, International and Consumer Assistance at its toll-free number (800) 638-2041 or (301) 796-7100 or at its Internet address <http://www.fda.gov/MedicalDevices/ResourcesforYou/Industry/default.htm>.

Sincerely yours,



for

Bram D. Zuckerman, M.D.  
Director  
Division of Cardiovascular Devices  
Office of Device Evaluation  
Center for Devices and Radiological Health

Enclosure

## 4. INDICATIONS FOR USE FORM

510(k) Number (if known): TBD K031005

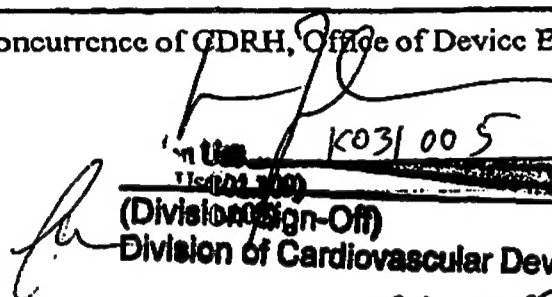
Device Name: LuMend™ Frontrunner GW CTO Catheter

### Indications For Use:

The LuMend Frontrunner™ GW CTO Catheter is intended to facilitate the intra-luminal placement of conventional guide wires beyond stenotic lesions (including chronic total occlusions) in the peripheral and coronary vasculature prior to further percutaneous intervention.

(PLEASE DO NOT WRITE BELOW THIS LINE - CONTINUE ON ANOTHER PAGE IF  
NEEDED)

Concurrence of GDRH, Office of Device Evaluation (ODE)

  
K031005  
~~11/01/03~~  
(Division Sign-Off)

Division of Cardiovascular Devices

510(k) Number K031005

Prescription Use ☒  
(Per 21 CFR 801.109)

OR

Over-The-Counter Use ☐

(Optional Format I-2-96)